



COURSE PRESENTATION FORM – ACADEMIC YEAR 2010/2011

COURSE NAME	Computational Linguistics
COURSE CODE	70142 (BSc and MSc 509) / 72023 (MSc 270) / 70097 (BSc OLD)
LECTURER	Raffaella Bernardi
TEACHING ASSISTANTS	Elena Cabrio
TEACHING LANGUAGE	English
CREDIT POINTS	4 (BSc OLD: 6)
LECTURE HOURS	24
EXERCISE HOURS	12
TIME SPAN	27.09.2010 - 21.01.2011
TIME TABLE	See Timetable Page
OFFICE HOURS LECTURER	During the lecture time, by appointments previously arranged via e-mail, Faculty of CS, POS Building, piazza Domenicani 3 , office 2.01
OFFICE HOURS TEACHING ASSISTANT	During the lecture time, by appointments previously arranged via e-mail, Faculty of CS, POS Building, piazza Domenicani 3 , office 2.10
PREREQUISITES	None
OBJECTIVES	<p>This course presents a graduate-level introduction to natural language processing, the primary concern of which is the study of human language use from a computational perspective.</p> <p>The principal objectives of the course are to provide students with a broad overview of the field, and prepare them for further study computational linguistics.</p> <p>No previous knowledge of linguistic theory and linguistic applications is assumed.</p>
SYLLABUS	<ul style="list-style-type: none">• Why is language/speech difficult and interesting?• Ambiguity,• History of the field;• Introduction to: Syntax and Formal Semantics;• Lexical Semantics• Textual Entailment• Formal Languages and Finite State Automata*;• Formal Grammars;• Parsing;• NLP and Logic.



* Formal Languages and Finite State Automata are not new topics for MSc and BSc (new study plan) students, but they are new for the BSc students of the old study plan. Hence the difference of 2 ECTS.

TEACHING FORMAT

Frontal lectures and labs

ASSESSMENT

- Critique and Project [50 % of mark]
- Final exam (written or oral) [50 %]

Remark: In case of a positive mark the project will count for all 3 regular exam sessions.

Hours distribution: students are expected to spend 32 hrs on the preparation of their critique and project; 32 hrs on the preparation for the final exam (studying of the material presented in class, the relevant chapters of the reading material and working on the exercises for the labs).

READING LIST

Textbooks:

- Daniel Jurafsky and James H. Martin, Speech and Language Processing. Prentice-Hall, 2000
- Patrick Blackburn and Johan Bos, Representation and Inference for Natural Language: A First Course in Computational Semantics, CSLI Publications, 2008
- Patrick Blackburn, Johan Bos, and Kristinga Stregnitz, Learn Prolog Now!, College Publications, 2006

Recommended Readings:

- Victoria Fromkin (Editor), Linguistics : An Introduction to Linguistic Theory, Blackwell Publishers, 2000

SOFTWARE USED

- Edits
- Stanford Parser
- WordNet Similarity tools
- Prolog (if students have the necessary background)

LEARNING OUTCOME

Overview of Computational Linguistics and hand-on experience on a specific topic (among those presented in class) of interest to the student.

COURSE PAGE

<http://www.inf.unibz.it/~bernardi/Courses/CompLing/10-11.html>